IV. REQUESTS

General Information

1. Provide the name and address of the location(s) where you maintain sanitary records relative to the operation and maintenance (O&M) of your Sanitary Sewer System(s).

   1200 W. Ogden Avenue, Naperville, IL 60563

2. Provide the name and title of the primary contact person(s) responsible for Sanitary Sewer System operation and maintenance. Also provide telephone, fax, and e-mail contact information for such person(s).

   Mark Straughn, Manager
   Water Distribution & Collection
   Office: 630-420-6138
   Fax: 630-420-4119
   E-mail: straughnm@naperville.il.us

   Tony Conn, Supervisor
   Collection & Pumping
   Office: 630-305-5537
   Fax: 630-420-4119
   E-mail: connt@napeville.il.us

3. Provide the following documents:

   a. The latest NPDES permit (IL00034061) issued for you the WWTP/Sanitary Sewer System(s), including modifications and the associated permit application.

      See Exhibit A

   b. A map of the service area for the WWTP that identifies the following information:

      i. Delineation of separate and combined sewer areas, if applicable N/A
      ii. Locations of SSOs reported in Question 21 (Exhibit B), chronic street flooding areas reported in Question 7 (N/A), and chronic Backup areas reported in Question 33 (N/A).
      iii. Location of all permitted and/or non-permitted outfalls, including WWTP, for your sanitary Sewer Systems (Exhibit B)

Collection System/Service Area

4. Provide the following information for your Sanitary Sewer Systems(s):
   City of Naperville & City of Warrenville

   a. Service area (in square miles): 41.3
   b. Population Served: 162,610
   c. System inventory: Includes City of Naperville & City of Warrenville systems

Miles of Gravity Main	Miles of Force Main	Number of Pump Stations
584.29	10.32	31

d. Number of Service Connections: (Naperville system only)

Residential	Industrial	Commercial	Total
38,678	22	3,170	41,870

e. Provide actual flows experienced for the previous 12 months expressed in millions of gallons per day (MGD). Cite the source or calculation method from which you obtained these values (e.g., flow meters, billing statements, etc.).

	Average Daily Wastewater Flow (MGD)	Source (or calculation method) of Average daily Wastewater Flow	Average Daily Water Consumption (MDG)	Source (or calculation method) of Average Daily Water Consumption Values
Residential	Not available		8.062	Utility Billing System
Commercial	Not available		4.635	Utility Billing System
Industrial	Not available		.445	Utility Billing System
Other	Not available		.932	Non revenue water
Total	19.4	WTP Flow Meter	14.074	DuPage Water Commission Water Metering

f. Minimum wastewater flow experienced in a 24 hours period for the previous 12 months expressed in MGD: 14.11

g. Is the Collection System a Combined Sewer System? No
If yes, what percent of the Collection System is combined? N/A

h. Provide infrastructure age distribution estimates for the Collection System (Naperville system only)

Age	Gravity Sewer, Miles	Force Mains, miles or feet	Number of Pump Stations
0 – 25 years	218.98	4.89	13
26 -50 years	261.70	3.32	7
51 – 75 years	37.39	0	2
> 76 years	16.02	.08	0

i. Provide pipe size distribution estimates for the Collection System. (Naperville system only)

Diameter in Inches	Gravity Sewer, miles	Force Mains, miles or feet
8 inches or less	395.23	2.74
9 – 18 inches	101.48	2.08
19 – 36 inches	21.36	3.48
> 36 inches	16.02	0

5. Indicate or describe a property owner's responsibility for maintenance and repair of Private Laterals (check one):

   a. At the main connection only:
   b. From main line to property line or easement/cleanout
   c. Beyond property line/cleanout
   (d.) Other: Ordinance (8-2B-4:12) – See Exhibit C
   Explain:

6. Describe any atypical local conditions that may increase the complexity or difficulty of the design, construction, operation, and maintenance of the Collection system. None

7. Identify whether you perform the following procedures to determine if the capacity of the existing Sanitary Sewer System is adequate for new conditions

   a. Is flow metering performed prior to allowing new connections?
   Yes____ No __X_

   b. Do you use a hydraulic model of the Sanitary Sewer System(s) to predict the effect of new connections?
   Yes_X__ No ____

   c. Do you require written certification by a licensed professional engineer indicating that the Sanitary Sewer System(s) has been determined to have adequate capacity to accommodate flow from new connections?
   Yes_X__ No ____

Are there portions of the Collection System service areas that have experienced street flooding, with sewage as a component, in the past five years? No

Satellite Sewer Systems/Sewer Use Ordinance (SUO)

8. Does the Collection System receive flow from Satellite System Sewer Communities? Yes

   If yes, complete the following chart.

Satellite Community Name	% Flow Contributed	Primary Contact Information for Satellite
Warrenville	8%	Mike Smith, Superintendant 28W701 Stafford Place Warrenville, IL 60555 Phone: 630-393-9427 msmith@warrenville.il.us

9. Do Satellite Sewer System communities enter into written agreements for wastewater services (contracts, charters, court orders, etc) with you? Yes.
   If yes, please submit a copy of such agreements. See Exhibit D

If yes, please answer the following questions listed below:

a. Do the agreements extend the requirements of the SUO to the Satellite Sewer System communities? Provide a copy of the SUO. Yes. See Exhibit D

b. Do you maintain the legal authority to control the maximum flow introduced in to the Collection System from Satellite Sewer System communities? Yes

c. Is flow metered at locations where flow from the Satellite Sewer System communities directly enters your Sanitary Sewer System? Yes

d. Do you have the authority to surcharge Satellite Sewer System communities for excessive flows (i.e. for excessive I/I)? No. If so, where is this authority designated?

e. Have you exercised your authority to surcharge Satellite Sewer System communities for excessive flow (i.e., for excessive I/I)? No

If yes, identify the Satellite Sewer System communities for which you took this action, when you took the action, and describe the action you took. Include all documentation of such action. N/A

10. Indicate whether the SUO contains procedures for the following, and in what section such procedures are included:

a. Inspection Standards Yes – Exhibit C (8-2B-4, 8-2B-18), Exhibit E (7-4D-9, 7-4D-25)
b. Pretreatment Requirements Yes - Exhibit C (8-2B-13:2) Exhibit E (7-4D-15)
c. Building/sewer permit process Yes - Exhibit C (8-2B-4) Exhibit E (7-4B-1, 7-4B-4, 7-4D-3, 7-4E-4)
d. Inflow Prohibition Yes - Exhibit C (8-2B-10, 8-2B-11) Exhibit E (7-4D-13, 7-4D-14)

11. Indicate whether the SUO contains procedures and enforcement authority to control the following, and in what section(s) the procedures are included:

a. Fats, Oils, Grease – Yes - Exhibit C (8-2B-13:1)
Exhibit E (7-4D-16)
b. I/I – Yes- Exhibit C (8-2B-4:8 and 9; 8-2B-9: 1 and 2)
Exhibit E (7-4D-8, 7-4D-12)
c. Building Structures over the sewer lines – Yes- The code does not specifically state this; however multiple code sections are used to enforce. See Exhibit S.
d. Stormwater connections to sanitary lines – Yes – Exhibit C (8-2B-9)
Exhibit E (7-4D-8, 7-4D-12)
e. Defects in private laterals – Yes – Exhibit C (8-2B-4:12)
Exhibit E (7-4E-7)
f. Sump Pump or air conditioner discharge – Yes - Exhibit C (8-2B-9)
Exhibit E (8-2B-9)

Force Mains

12. Identify the total number of Force Main failures that have occurred in the last five years.

1 – Century Hill Force Main (Nov 2013), see Exhibit B.1 for location.

13. Provide a description of the cause(s) of each Force Main failure that has occurred in the last five year, and the actions to correct such failures.

Lateral crack in force main. The force main was repaired immediately. Area was cleaned. Force main is scheduled for rehabilitation in 2015.

Pump Stations

14. Provide the following information related to Pump Stations in your Collection System: (City of Naperville system only)

a. Total number of Pump Stations in the Collection System: 22

b. Number of Pump Stations with on-site pump capacity redundancy: 22

c. Number of Pump Stations with dry weather capacity limitations: 0

d. Number of Pump Stations with wet weather capacity limitations: 0

e. Number of Pump Station failures resulting in SSOs or Backups in the last five years: 0
f. Number of Pump Station fed with electrical power from at least two independent electrical power grid feeds: 0

g. Number of Pump Stations with permanently installed backup power generators onsite that automatically activate when supplied power is interrupted: 20

h. Number of Pump Stations with backup power capability, but only with portable generators to be brought to the Pump Station site from other locations: 2

i. Number of Pump Stations with "pump around" capability (i.e., where Pump Station wet well can be evacuated and pumped with portable pump to nearby downstream Sanitary Sewer System manhole): 8

j. Number of Pump Stations where conditions are monitored remotely and that trigger an alarm at a central monitoring location (e.g., at the WWTP or central public works center): 22

Wastewater Treatment Plant

15. Provide the following design flow ratings for the WWTP in MGD.

a. Design Average Daily Flow: 26.25
b. Design Peak Wet Weather Flow: 55.13

16. Provide the following peak actual flows experienced at the WWTP in the last five years in MGD. (April 18, 2013 – Flood)

a. Peak Daily Flow: 71.23
b. Peak Hourly Flow: 72.0
c. Peak Instantaneous Flow: 72.0

17. Describe any processes or operations that can limit the treatment capacity of efficiency at the WWTP (e.g., pump capacity, flow restrictions, tank size, etc.) None

18. Provide the following data for each year for the last five years:

a. Dates and descriptions of WWTP numeric and narrative effluent limit exceedances See Exhibit R.
b. Dates and volumes of flows from the Collection System that did not receive full secondary treatment and dates of the bypasses at the WWTP and flow bypassed April 18, 2013- Overflow from emergency lagoons (Discharge Site #002 South Operations Center @ 1800 S. Washington Street and Discharge Site #003 Water Service Center @ 1200 W. Ogden Avenue). Estimated volume of 18,250,700 gallons was discharged from the two discharge sites to the West Branch of the DuPage River. No flow was bypassed at the WWTP for the reporting period.
c. Dates of treatment upsets at the WWTP due to wet weather flow 8/3/2010, 4/18/2013

19. For each event identified in response to Question 18b, indicate whether the discharge condition is authorized under your NPDES permit. If the discharge condition is permitted, specify the permit provision authorizing such discharge. This discharge condition is authorized under Special Condition 12 of the NPDES permit. See Exhibit A.1.

Sanitary Sewer Overflows

20. Describe each SSO that has occurred in the Collection System within the last five years. Include the following information for each SSO (create a supplemental table as necessary to list the data below): See following pages for tables

a. Date of the SSO
b. Location of the SSO
c. Estimated volume of the SSO (in gallons or million gallons (MG))
d. Cause of the SSO
e. How you determined that the SSO occurred
f. Depth of precipitation (in inches) received (if any) contributing to the SSO
g. Peak WWTP flow (in MGD) on the day that the SSO occurred
h. Disposition of the SSO (i.e., did the release reach a waterway, flow to storm sewer, paved areas, etc.)
i. Actions taken to mitigate the SSO
j. Whether or not you reported the SSO to the state environmental agency
k. How soon after the SSO you reported it
l. Whether any samples of the SSO discharge were collected and analyzed

Hillside Siphons SSO	
Date	11/3/2013
Location	Hillside Rd and Washington St. 564 an 619 S. Washington St 620, 622, 628, 630 S. Main St
Estimated volume	2,000 gallons
Cause	Grease blockage
Determination	Calls
Depth of contributing precipitation received	None
Peak WWTP flow on day of SSO	30.3 MGD
Disposition of SSO	Paved area
Actions taken to Mitigate	Siphon was cleaned, flushed, area was cleaned, second effluent barrel was added to siphon, siphon was rehabbed in March 2015
Was it reported to Environmental Agency?	Yes. See Exhibit O.

How soon after SSO did you report it?	Within 24 hours
Any samples of SSO collected and analyzed?	No
Century Hill Force Main SSO	
Date	11/20/2013
Location	Parkway off of Chicago Avenue , 25W261 Concord
Estimated volume	200 gallons
Cause	Force main break
Determination	Call
Depth of contributing precipitation received	None
Peak WWTP flow on day of SSO	29.4 MGD
Disposition of SSO	None
Actions taken to Mitigate	Force main break was repaired. Area was cleaned. Force main will be rehabbed in 2015
Was it reported to Environmental Agency?	Yes. See Exhibit Q.
How soon after SSO did you report it?	Within 24 hours
Any samples of SSO collected and analyzed?	No
April 2013 Flood	
Date	4/18/2013
Location	See Exhibit F
Estimated volume	18,250,700 gallons
Cause	Flood of April 2013
Determination	Investigations and calls
Depth of contributing precipitation received	6.1” (South Operation Plant Rain Gauge)
Peak WWTP flow on day of SSO	72 MGD
Disposition of SSO	Reached waterways

Actions taken to Mitigate	Areas were cleaned, continued sanitary sewer rehabilitation program; offered 75% reimbursement of backflow prevention devices to residents
Was it reported to Environmental Agency?	Yes, See Exhibit P.
How soon after SSO did you report it?	Within 24 hours
Any samples of SSO collected and analyzed?	Yes

21. Identify the number of SSOs that originated from each of the following sources in the last five years:

    a. Manholes: 1
    b. Pump Stations: 0
    c. Main and trunk sewers: 1
    d. Lateral and branch sewers: 0
    e. Structural Bypasses or relief points: 0
    f. Force Mains: 1
    g. Other, explain: Multiple basement backups (Flood- April 18, 2013)

22. Identify the volume of SSOs expressed in gallons or MG from each of the following sources in the last five years:

    a. Pump Stations: 0
    b. Forcemains: 200 gallons
    c. Manholes: 0
    d. Other, explain: April 18, 2013 Flood - 18 MG

23. Identify the number of SSOs caused by the following in the last five years:

    a. Debris buildup: 0
    b. Collapsed pipe: 0
    c. Root intrusion: 0
    d. Capacity limitations: 0
    e. Excessive I/I: Flood - April 18, 2013
    f. Fats, oil, and grease: Hillside Siphon
    g. Vandalism: 0
    h. Power interruption and/or lack of backup power source: 0
    i. Mechanical or electronic failure: 0
    j. Pump failure and/or lack of backup (or duplex) pumps: 0
    k. Other, explain: Century Hill Force Main - Break

24. For the SSOs to waterways that are identified in response to Question 21, how many were to surface waters that could affect: West Branch DuPage River is on Illinois 303(d) list for water quality impairments- aquatic life, fish consumption and primary contact recreation.

    a. Primary contact recreation (swimming, bathing, waterskiing, etc.): 0
    b. Shellfish growing areas: 0
    c. Drinking water sources: 0

25. What equipment is available to you for responding to SSOs?

    Sewer combination trucks, portable pumping equipment, portable generators

26. Describe how you monitor SSO occurrence and frequency.

    Supervisory Control and Data Acquisition (SCADA) system, City field staff, customer service calls

27. Identify whether you have developed and adopted written procedures or instructions for the following and describe your procedures for the following: See Exhibit G Procedures

    a. Identifying SSOs: Yes
    b. Emergency response for SSOs: Yes
    c. Reporting all SSOs to the state regardless of size: Yes
    d. Containment or cleanup to mitigate the effect of SSOs: Yes
    e. Problem evaluation and resolution: Yes

28. Describe your procedure for reporting SSOs to the state environmental agency.

    Phone calls, written documentation transmitted to IEPA

<u>Backups</u>

29. Describe how you document the occurrence of, and response to, Backups.

    Work order system (Cityworks), our internal computerized work order system

30. Indicate the month and year when you began to document Backups:

    March 1986

31. Provide a description of each Backup that has occurred within the Collection System within the last five years. Include the following information for each Backup (create a supplemental table as necessary to list the data below): See tables on following pages

    a. Date of Backup:
    b. Location/Address
    c. Estimated volume of Backup;
    d. Cause of the Backup;

e. Weather conditions during the Backup. If excessive rainfall contributed to the Backup, please list the rainfall amount and the duration of the rainfall event(s);
f. Methods used to remove the Backup water from the property and disposition of Backup water (i.e., was the property owner's accumulated Backup pumped out of the residence to a street storm sewer drain; relieved to a sanitary cleanout or sanitary drain; transported to the plant for treatment; vacuumed and hauled away; etc.);
g. Actions taken to mitigate the Backup;
h. Time to clear or fix the Backup;
i. Whether or not the Backup was reported to the state environmental agency and how soon after the Backup this was done;
j. List the measures used to mitigate the environmental harm caused by the Backup water removal, if that water was untreated;
k. Responsible party (e.g., private property owner or you); and
l. Whether or not a damage claim was filed and dollar value of the claim.

Hillside Siphon Backups	
Date of Backup	11/3/2013
Location	Hillside Rd and Washington St. 564 and 619 S. Washington St 620, 622, 628, 630 S. Main St
Estimated volume	2,000 gallons
Cause	Grease blockage
Weather Conditions	Dry
Methods used to remove backup water from property and disposition	None
Actions taken to Mitigate	Siphon was cleaned, flushed, area was cleaned, second effluent barrel was added to siphon, siphon was rehabbed in March 2015
Time to clear or fix backup	2 hours
Was it reported to Environmental Agency? And how soon?	Yes – Within 24 hours. See Exhibit O
Measures used to mitigate environmental harm caused by backup water removal	Area washed and vacuum cleaned
Responsible Party	City
Damage claim filed and dollar value of claim	Yes, $13,628.13 damages claimed, $0.00 paid

April 2013 Flood Backups	
Date of Backup	4/18/2013
Location	See Exhibit F
Estimated volume	unknown
Cause	April 18, 2013 Flood
Weather Conditions	Flood
Methods used to remove backup water from property and disposition	Drained back to system (assumed)
Actions taken to Mitigate	Continued sanitary sewer rehabilitation program; offered 75% reimbursement of backflow prevention devices to residents
Time to clear or fix backup	Unknown
Was it reported to Environmental Agency? And how soon?	Yes – Within 24 hours. See Exhibit P.
Measures used to mitigate environmental harm caused by backup water removal	Continued sanitary sewer rehabilitation program; offered 75% reimbursement of backflow prevention devices to residents
Responsible Party	N/A
Damage claim filed and dollar value of claim	Yes, $361,715.33 damages claimed, $0.00 paid

32. Are there portions of the Collection System that have chronic problems with Backups? No

If yes, list and describe each area and the reasons for chronic Backups in that area.

Infiltration and Inflow

33. Provide the following information for I/I in the Sanitary Sewer System(s)

a. Have you done an assessment to determine the extent of I/I? If yes, explain the circumstances and include a copy of your analysis in the response to this request.

Yes – See Exhibit H.1, 2 and 3.

b. Has it been demonstrated that it is more cost effective to eliminate rather than treat I/I? Explain.

Yes. See Exhibit I and Exhibit N.

c. Have you performed a sewer system evaluation study (SSES), as defined in the U.S. EPA Handbook for Sewer System Evaluation and Rehabilitation (December 1975)? If you have include a copy of the study in your response to this request.

Yes – Exhibit H.1

d. Have rehabilitation projects been prioritized for correcting I/I problems?

Yes – Exhibit J

If yes, how far has the I/I program progressed? Include any supporting documents.

Manhole Rehabilitation – 1,277 rehabilitated to date
Lateral Rehabilitation – 2,442 rehabilitated to date
Main Rehabilitation – 512,910 LF rehabilitated to date

e. Do you or any of your Satellite Sewer System communities have private source I/I reduction program? Yes If yes, describe program.

City of Naperville – 75%/25% Stormwater Disconnection Program - Exhibit K
City of Naperville Private Manhole Repair Program
City of Naperville Private Cleanout Repair Program

Operation and Maintenance

34. Have you developed a capacity, management, operation, and maintenance (CMOM) program, as defined in the U.S. EPA Guide for Evaluating Capacity, Management, Operation, and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (January 2005)? If yes, when? Provide all supporting documentation.

CMOM established in 1987, regularly revised and updated. See Exhibit L for current CMOM.

35. If yes, please include a copy of your most recently implemented CMOM program in your response.

See Exhibit L

36. Describe the operation and maintenance (O&M) procedures you have in place to locate and eliminate problems in your Collection System that would cause or contribute to SSOs and Backups. These procedures can include, but are not limited to, grease control, root control, sewer cleaning, I/I evaluation, problem area targeting, downspout disconnection program, etc.

Sewer Cleaning Program
Televising
Flow Monitoring
Stormwater Disconnection Program

37. Indicate whether you have developed and adopted written procedures or instructions for the following:

    a. Collection system maintenance Yes. See Exhibit L, sections: Flushing, Lift Station Maint, Manholes, Monthly Inspections,
    b. Collection system capacity management Yes. See Exhibit L, sections: Flow Meters, New Construction

38. Does the Sanitary Sewer System(s) experience chronic O&M problems that are attributed to design problems? No If yes, please provide brief explaination. N/A

39. Does the Sanitary Sewer System(s) experience chronic O&M problems that are the result of construction issues in the system? No. If yes, please provide brief explaination. N/A

40. Do you physically inspect all sanitary system manholes on a defined frequency? Yes

    If yes, on what frequency: every__12-60__months (e.g., every 36 months)

41. List the frequency of cleaning sewers and manhole basins for the following:

    a. Largest sewers: every____12-60___months (e.g., every 36 months)
    b. Smaller sewers: every____1-60___months (includes preventative maintenance)

42. Do you conduct internal smoke testing to evaluate the condition of the Collection System?

    No

    If yes, on what frequency? Every_____months (e.g., every 36 months)

43. Do you televise the sewers to evaluate the condition of the Collection System?

    Yes

44. Do you operate an industrial pretreatment program approved by EPA or the State?

    No

Wastewater User and Customer Complaints

45. Describe how you receive, document, and respond to citizen complaints regarding the Sanitary Sewer System.

    Cityworks (City computerized work order system), GovQ/A (Citizen web portal), Phone call to City Dispatch (after hours), Customer Calls to Utility offices during normal business hours.

46. Provide the following information related to Sanitary Sewer System user complaints:

    a. Number of user complaints received each year for the last five years:

       157 (April 18, 2013 Flood)
       6 (Hillside Siphon)

       Number of user complaints received each year for the last five years that were your responsibility

       None, no claims paid on above incidents.

    b. Number of claims received and damages paid each year for the last five years

       2010 3 claims, $1,000 paid
       2011 2 claims, $0.00 paid
       2012 3 claims, $0.00 paid
       2013 47 claims, $0.00 paid
       2014 3 claims, $0.00 paid

47. Provide the number of public health or other warnings you issued that were attributed to wastewater each year for the last five years and the dates of each such warning.

    None

OTHER SUPPORTING DOCUMENTATION

****Exhibit M -2008 USEPA Inspection*****